

AMENDMENT UNDER 37 C.F.R. § 1.111
Application No. 09/715,171

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. By this Amendment, Applicant has added new claims 17 and 18. Thus, claims 1-18 are now pending in the application. Applicant respectfully submits that the pending claims define patentable subject matter.

Claim 13 is rejected under 35 U.S.C. § 102(e) as being unpatentable by Karlsson (USP 6,222,829). Claims 1-2, 4-7, 9-13 and 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaaresoja in view of newly cited Karlsson (USP 6,222,829). Claims 3, 8, 14 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaaresoja in view of Karlsson and Olkkonen et al. (USP 6,738,374; hereafter “Olkkonen”). Applicant respectfully traverses the prior art rejections.

With regard to the § 103 rejections of independent claims 1, 6, 12, 13 and 16, the Examiner concedes that Kaaresoja fails to disclose a transmission channel which has a limited data rate associated with transmission in circuit mode, as claimed. However, the Examiner asserts that Karlsson teaches “second protocol to transmission in circuit mode (col. 2, lines 1-8, col. 3, lines 1-5 and 45-62, col. 4, lines 22-26, incoming 64 kb/s, outgoing 5300 b/s).” The Examiner further asserts that:

it would have been obvious ... to modify the device of Kaaresoja by specifically adding feature of second protocol to transmission in circuit mode in order to enhance packet data received across the Internet Protocol communication network sent by the mobile station from the Internet Protocol telephony format to circuit mode as taught by Karlsson.

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Applicant respectfully submits that claims 1, 6, 12, 13 and 16 would not have been rendered obvious in view of Kaaresoja and Karlsson because the cited references, alone or in combination, do not teach or suggest all of the features of the claims, and one of ordinary skill in the art would not have been motivated to combine and modify the cited references to produce the claimed invention.

In the example disclosed in the present application, the “second protocol” is the GSM protocol, and more generally, the “second protocol” corresponds to a protocol for transmission in circuit mode (which, as opposed to packet mode, does not allow very high data rates, as known to the skilled person). Other than this change from synchronous mode to asynchronous mode, all other properties of this (second) protocol are kept the same. On the other hand, Kaaresoja’s ATM core network 206 linking the IWF (transcoder) 208 and the BTS 200 is utilized for transmitting data via the ATM protocol (packet mode) at a very high data rate transmission, as is well known to those skilled in the art. Thus, ATM cannot be used for transmission over a transmission channel “having a limited data rate associated to transmission in circuit mode”.

Karlsson discloses Internet protocol telephony for a mobile station on a packet data channel. A gateway to the mobile radio network receives an incoming voice call for a destination mobile station and accesses information pertaining the status and location of the destination mobile station. A determination is made as to whether the destination mobile station is capable of operation in a voice mode using circuit-switched communications across a traffic channel. If the destination mobile station is operable in the voice mode, a circuit-switched communication on a traffic channel is established between the mobile radio network (i.e., a

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Visited Mobile services Switching Center (VMSC 120)) and the destination mobile station (MS 130). Otherwise, the incoming voice call is routed to a voice gateway which converts the voice call to data packets and routes the data packets to the mobile station across an Internet Protocol communication network to a packet gateway of the mobile radio network. The packet gateway routes the call across a packet data channel of the mobile radio network to the destination mobile station using a packet data service.

Accordingly, Karlsson discloses circuit-switched communication over a data channel between the mobile station and the switching center (VMSC). Nowhere does Karlsson disclose a transmission channel which interconnects first and second relays and has a limited data rate associated with transmission in circuit mode. As such, one of ordinary skill in the art would not have been motivated to replace Kaaresoja's ATM core network which links the IWF (transcoder 208) and the BTS (200) with a transmission channel which has a limited data rate associated with transmission in circuit mode. In fact, assuming for the sake of argument that the one of ordinary skill in the art would have been motivated to modify Kaaresoja based on the teachings of Karlsson (which Applicant submits is incorrect), the result would be that Kaaresoja utilizes a circuit-switched communication over a data channel between the mobile station and the BTS.

Moreover, the Examiner has not provided any objective reason why one of ordinary skill in the art would have motivated to modify communications between the BTS (200) and the IWF (transcoder 208) of Kaaresoja to utilize a transmission channel having a limited data rate associated to transmission in circuit mode. As discussed above, Kaaresoja's ATM core network 206 linking the IWF (transcoder 208) and the BTS (200) is utilized for transmitting data via the

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ATM protocol in packet mode at a very high data rate transmission. Since ATM cannot be used for transmission over a transmission channel having a limited data rate associated to transmission in circuit mode, one of ordinary skill in the art would not have been motivated to modify Kaaresoja's ATM core network. Further, the Examiner's alleged motivation for modifying Kaaresoja's ATM core network (i.e., "to enhance packet data received across the Internet Protocol communication network sent by the mobile station from the Internet Protocol telephony format") is not supported by the teachings of Karlsson since utilizing a transmission channel which has a limited data rate associated with transmission in circuit mode between the IWF (transcoder 208) and the BTS (200) of Kaaresoja would result in a substantial decrease in the data transmission rate.

Accordingly, Applicant respectfully submits claims 1-16 would not have been rendered obvious in view of the Examiner's proposed combination of Kaaresoja and Karlsson because the cited references do not teach or suggest all of the features of the claims and one of ordinary skill in the art would not have been motivated to combine and modify the teachings of the cited references to produce the claimed invention.

With regard to the § 102 rejection of claim 13, the Examiner asserts that Karlsson discloses all of the features of the claimed invention. By this Amendment, Applicant has amended claim 13 (as well as claim 16) to recite that the data messages formatted in the second protocol are transmitted to or received from another relay over a transmission rate channel having a limited data rate associated to transmission in circuit mode, in order to prevent the claims from allegedly reading on the VMSC (120) of Karlsson. Applicant respectfully submits

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that the claimed transmission channel having a limited data rate, not matter how broadly construed by the Examiner, can not correspond to or read on the transmission channel between the VMSC 200 and the mobile station 130 of Karlsson. Accordingly, Applicant respectfully submits that Karlsson does not teach or suggest “means for transmitting the data messages formatted in the second protocol to another relay over a transmission channel having a limited data rate associated to transmission in circuit mode, wherein the data messages formatted in the second protocol include data messages of different lengths.” Thus, Applicant respectfully submits that claim 13 should be allowable over Karlsson.

By this Amendment, Applicant has added new claims 17 and 18 to provide claims of different scope. Applicant respectfully submits that claims 17 and 18 should be allowable because the cited references do not teach or suggest the claimed features of:

performing a conversion between transmission on a radio interface where messages of variable size are sent or received at fixed and regular time intervals and with a variable rate, and transmission on terrestrial interfaces using fixed rate channels, the method comprising transmitting on said terrestrial interfaces said messages of variable size to be sent or received on said radio interface, following each other without any time interval between each other, instead of at fixed and regular time intervals, so as to optimise use of available bandwidth on said channels.¹

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

¹ See, for example, Fig. 3 and pages 11-13 of the present application.

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Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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